Creative and critical approaches to language learning and digital technology: findings from a multilingual digital storytelling project

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ABSTRACT

This article presents findings from the global literacy project, Critical Connections: Multilingual Digital Storytelling (MDST), which provides a means of nurturing and reflecting multiliteracies in practice. It recognises the power of storytelling and the space stories offer both for self-representation and for engaging with otherness. It draws on affordances of the digital medium for multimodal composition and for collaborative and dialogic ways of working and sharing across boundaries of home, school and community. It values and supports multilingual repertoires recognising that every language is a distinct medium with its own expressive resources, its own palette of colours, its own sounds and rhythms, all shaped by and representing history, culture, values and beliefs. The core argument is that greater attention needs to be given to the multilingual dimension within multiliteracies research. We outline the theoretical framework underpinning our research and the rationale for adopting a critical ethnographic approach. We explore the significance of MDST for young people and their learning; the effective pedagogical framework for carrying out MDST; and the implications for policy and teacher development. This research enabled us to demonstrate the importance of an integrated and inclusive approach towards languages within the multiliteracies framework.

Introduction

Over the past decade, there has been growing interest internationally in the application of digital storytelling as an educational tool (Di Blas and Ferrari 2014). This has included various studies with a focus on contexts of second and foreign language learning at different levels, which have reported benefits in relation to: vocabulary development and memorisation (Tsou, Wang, and Tzeng 2006); oracy, in particular pronunciation, fluency and expression (Castañeda 2013); (multi)literacy skills, especially scaffolding of (multimodal) composition process (Skinner and Hagood 2008; Oskoz and Elola 2014); creative and critical thinking (McGeoch and Hughes 2009; Yang and Wu 2012); student-centred,

collaborative learning (Vinogradova, Linville, and Bickel 2011); building bridges between out-of-school and in school learning (Skinner and Hagood 2008); engagement linked to learner agency, self-efficacy, a dynamic interaction with culture and identity construction (Skinner and Hagood 2008; McGeoch and Hughes 2009; Castañeda 2013). It should be noted that, thus far, there has been little work done on digital storytelling in community/heritage[1] language classrooms.

This article presents findings from the global literacy project, Critical Connections: Multilingual Digital Storytelling (MDST). Whereas most of the studies referred to the above have focussed on the teaching of one language in a single institution, this article offers a much broader multilingual perspective. Our field work was carried out across educational phases, primary and secondary age, and sectors, complementary[2] and mainstream schools, with teachers and students studying foreign and community/heritage languages (Arabic, Chinese, Croatian, English as a foreign language, French, German and Greek) as well as EAL and English mother tongue. The study which took place from 2012 to 2014 involved 13 schools in and around London as well as schools in 3 other countries (Algeria, Palestine and Taiwan). Digital stories were created mainly in bilingual version, and then shared through an online platform as well as through annual film festivals.

Underpinning Critical Connections: MDST has been an integrated and inclusive approach to literacy and language learning and a recognition of the way digital media have extended and transformed meaning-making and ways in which we interact with others. The title of the project seeks to emphasise two central concerns: first, connections being made across languages and cultures, across curriculum areas and across sites of learning; second, a critical stance towards the creative process empowering students to assert their agency and voice and creating space for the construction of confident, plurilingual identities.

Theoretical framework

A consequence of the globalising forces shaping the late modern period has been to bring into sharper focus the tensions between monocultural and intercultural perspectives on society and this has been strongly reflected in national curriculum policy and pedagogy (Anderson and Obied/Macleroy 2011). Seeking to offer more critical engagement with multilingualism and the digital media, our interest in the potential of MDST was grounded on principles derived from five theoretical perspectives:

(1) Critical literacy
(2) Sociocultural theory and dialogism
(3) Multiliteracies framework
(4) Theories of second language acquisition and bilingualism
(5) Principles/methods of second and foreign/community language teaching

A critical literacy perspective (Cummins 2000; Janks 2010; Blackledge and Creese 2010; Lytra and Martin 2010; Luke 2013) is consistent with the inclusive and integrated approach adopted in the Critical Connections: MDST project. First, this perspective emphasises the interrelationships between different forms of language learning and challenges hierarchical views about language. Second, it asserts the right of bilingual learners

to have their bilingualism acknowledged and valued, including support for 'mother tongue' development. Third, towards achieving this, it recognises the contribution made by the complementary school sector in the teaching of first languages and in resisting the monolingualising ideology of mainstream society and schooling.

Sociocultural theory (Wood, Bruner, and Ross 1976; Wenger 1998; Mercer 2000) understands learning as a process developing through social interaction within culturally specific contexts and ultimately characterised by socialisation into particular communities of practice. Whilst essentially collaborative and dialogic in nature (Bakhtin 1981), the theory sees the agency of the learner as central, recognising how, beyond linguistic and cognitive dimensions, learning involves an investment of self (Norton and Toohey 2011; Darvin and Norton 2015; Pahl and Rowsell 2012). Moreover, learning is seen as occurring not just in school, but across multiple sites and there is recognition of how 'funds of knowledge' in the home and community can provide different and enriched pathways to understanding (Gonzales, Moll, and Amanti 2005). The scope for the dialogic in learning and for allowing different voices to be heard has been transformed by rapid advances in the digital media extending channels for meaning-making and creating new global audiences (Wegerif 2013).

In a context in which multilingual and multimodal, digital communication have become the norm, monolingual, print-based understandings of literacy have been expanded to take account of a much wider range of semiotic possibilities captured in the term 'multiliteracies' (Cope and Kalantzis 2000, 2013). The multiliteracies framework proposes the term 'design' to capture the multidimensional, multi-layered, multi-stage construction process frequently involved in the creation of texts. It recognises that texts fall into different genres shaped by the social context and by the audience for which they are intended. Pedagogically it foregrounds four 'knowledge processes' expressed most recently in the terms 'experiencing, conceptualising, analysing and applying' (Cope and Kalantzis 2013, 125). MDST, with its emphasis on learner agency and voice, its grounding in individual lifeworlds and narrative forms, its translingual and transcultural affordances and its creative but critical stance towards the digital media may be seen to offer a rich context for fostering multiliteracies.

A further perspective comes from recent directions in the fields of second language acquisition and bilingualism. Nationalist discourses constructing languages as autonomous, bounded systems, have been replaced by a growing appreciation of the fluid and dynamic relationships between languages in society and in the mind. Thus, notions of linguistic repertoires and multicompetency are seen to represent a more constructive vision for second language learning than that offered through adopting artificial native speaker norms. Complementing this, post-structuralist work on identity construction has enabled a deeper appreciation that communication through a second language at any level implies an investment in and indeed a reshaping of the self (Norton and Toohey 2011).

A final perspective relates to the rethinking of principles/methods of second and foreign/community language teaching in the late modern, post-communicative era (Kramsch 2014). With the development of the more holistic and integrated view of language expressed in the multicompetency model has come a deeper understanding of processes of language transfer and a pedagogical shift to view judicious use of translanguaging as a legitimate means of supporting both linguistic and conceptual development and of fostering intercultural as well as metalinguistic awareness (Garcia 2009).

Fundamental to the approach to language teaching which characterises the post-communicative era has been the shift from an instrumental view preparing students to perform a narrow range of functions required by the tourist to one involving a deeper and more personal engagement with cross-curricular and intercultural content (Kramsch 1993; Byram 1997; Coyle, Hood, and Marsh 2010; Liddicoat and Scarino 2013; Curtain and Dahlberg 2015; Mercer 2016). This may in part explain the renewed interest in linking language learning with arts-based creativity including storytelling, drama and film (Anderson and Chung 2011; Hanauer 2012; Kenner and Ruby 2012; Winston and Stinson 2013). In line with humanistic thinking, creativity for learning focuses on the whole person bringing together cognitive and personal, affective dimensions and fostering learner agency and a sense of ownership (Stevick 1996; Williams and Burden 1997; Arnold 1999).

Extending these developments in pedagogy has been the new possibilities and perspectives brought about by advances in digital media and the integration of language(s) within a much broader semiotic frame. Building from an integrative model of Computer-Assisted Language Learning, the term network-based language teaching (NBLT) has been introduced to capture 'the pedagogical use of computers connected in either local or global networks, allowing one-to-one, one-to-many, and many-to-many communication' (Kern, Ware, and Warschauer 2008, 281). Within this context, activities such as podcasting, blogging and digital storytelling have become increasingly common in the language classroom. Moreover, the affordances of the digital medium have been drawn upon to facilitate partnerships with schools abroad bringing valuable opportunities for intercultural dialogue and collaboration (Evans 2009; Thorne 2010).

Drawing on these perspectives, in Figure 1, we have sought to illustrate how our vision of MDST fits within a broader communication landscape and educational context. A distinctive feature of this project is the way it is situated within a transformative pedagogical
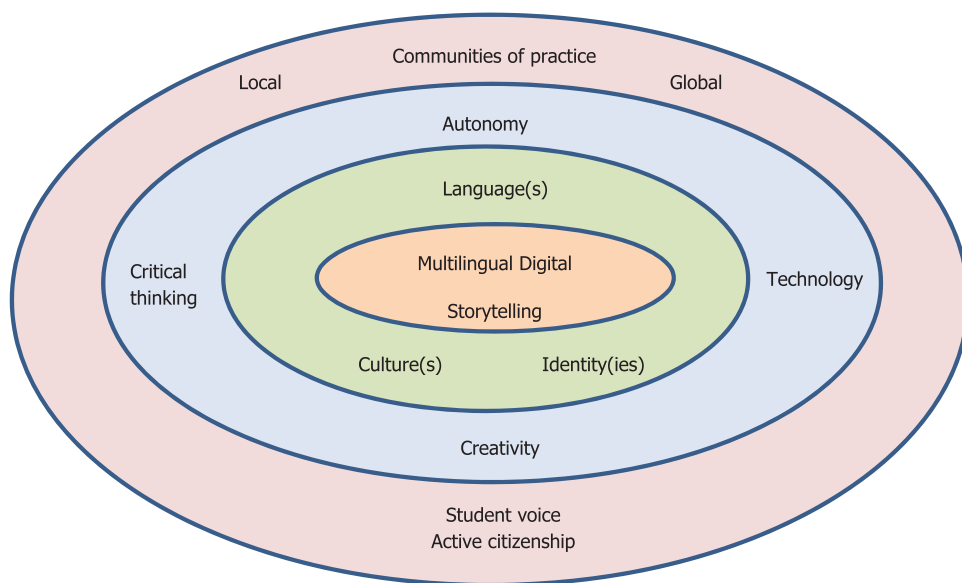
Figure 1. The broad conceptual framework for MDST (Anderson, Chung, and Macleroy 2014b)

approach and one which recognises social and cultural as well as intellectual and techno-logical dimensions to learning.

Methodology

The multifaceted nature of the project, illustrated in Figure 1, and the fact that over 500 students and 16 lead teachers were involved across different settings meant that the investigative tools employed to research it needed to be particularly attuned to the context, relationships and process and flexible enough to accommodate multiple perspectives crossing student learning and engagement, pedagogical principles and structures, and implications for policy and teacher professional development. These are captured in the following three research questions upon which the study was based:

(1) What is the significance of MDST for young people and their learning?
(2) What is an appropriate pedagogical framework for carrying out MDST work in schools?
(3) What are the implications for policy and teacher professional development?

   Given the nature of the study including the multiple elements and complex interrelationships described above, critical ethnography (Carspecken 1996) was chosen as the central research methodology for the study linked to ecological, collaborative and multimodal perspectives. Whilst the ethnographic paradigm supports the qualitative, context-based, participatory, multi-perspectival and interpretive research approach we wished to adopt, it does not necessarily bring the critical edge which we saw as fundamental to the investigation. As has been made clear above, our work is founded on an educational philosophy which embraces social justice as a core principle and sets out to challenge coercive relations of power inscribed within government policy and translated into practices in schools.

   Consistent with and strengthening critical ethnography, ecological research, rather than focussing on discrete elements in isolation, takes a holistic, situated view and one which focusses on context, agency, relationships and process. Sociocultural in orientation, this approach views people as members of communities of practice (Lave and Wenger 1991) whose ways of thinking and sense of self are shaped by their participation and membership.

   A valuable development of this ecological approach comes from the Continua of Biliteracy model (Hornberger 1989) which foregrounds power relations in a hierarchy of nested ecosystems and allows complex interactions to be accounted for in its multi-layered analysis of literacy processes in multilingual settings. This fits with the range of perspectives and settings built into the design of the study.

   Related to this, a collaborative strand was incorporated into our research methodology. This took two forms: the first, in the ongoing involvement of teachers as a group in discussion of developments in their own schools and identification of significant factors; the second, in the involvement of selected students in each school as co-researchers developing their own questions in relation to the project, carrying out interviews with peers, teachers and parents, summarising their key findings and then reporting back to various audiences including at a film festival.

Given the focus on use of digital media in the project, we also drew on multimodal analysis particularly in relation to the composition process to examine how students were drawing on and blending the range of semiotic resources available to them. In framing the multimodal dimension of the project, we were very aware of the need to look at how digital storytelling could develop and support personal efficacy and expertise and the place of critical, social and political understanding within such a framework (Sefton-Green 2013). As part of our research design, we recognised the importance of seeking out 'shades of meaning' and promoted a methodological approach that captured a sense of being there and integrated 'tools from the literary, visual and performing arts into research designed to understand bilingual-biliterate experience' (Cahmann-Taylor 2011, 99).

A project website[3] was produced to house the multilingual digital stories and resources created. Regular meetings were held with lead teachers as well as student co-researchers at Goldsmiths to plan, implement and carry out ongoing evaluation of the project. Video recordings were made of these team meetings to catch the slowly changing perspectives of the participants and share ongoing experiences and practice. Video, interview and documentary data were collected from all the project schools with the support of our photography/video operators.

The main types of data collected through the project in all London-based schools (six mainstream and seven complementary schools) and contributing to the research findings presented in this paper were:

- video recordings and photographs (observing the making of digital stories in schools; presenting digital stories at conferences and film festivals)
- interviews with students, teachers, parents and community members
- video/audio recordings of team meetings and training workshops (researchers and teachers; student co-researchers)
- documentary (school policies, schemes of work; teaching plans and materials; students' work – notes, storyboards)
- digital stories in draft and final versions
- student co-researchers' data and analysis (presented at conferences and film festivals)
- field notes

We created a MDST site on OneNote online and uploaded all our research data onto this site to carry out analysis. This enabled us to manage and incorporate the multimodal data into our analysis and start to identify emerging themes from the video, interview and documentary data. Multimodal analysis enabled us to take a more holistic approach looking at the construction of the digital stories from a design perspective. In examining digital stories in the making we analysed how young people became meaning-makers and moved through pre-production, production and post-production phases making decisions about their languages and representation. We analysed the way in which different modes were combined to make meaning and how young people moved from the two-dimensional storyboard to the digital story recording episodes of experimentation, decision-making and problem-solving.

Our research questions guided our analysis as this approach draws together data from a variety of sources and 'enables patterns, relationships, comparisons and qualifications across data types to be explored conveniently and clearly' (Cohen, Manion, and Morrison

2007, 468). We were very aware of the overlaps in the data and interconnections between the emerging strands. A significant part of our multi-methods approach was a collaborative form of analysis, interrogating and discussing the digital storytelling process between lead teachers and researchers, enabling constant comparison across sites of learning. Whilst it was important to foster critical and reflective practices amongst teachers, there was also a need for researchers to be ready to question their own assumptions about their role and to 'envision their work as creating learning communities within which they also participate as teachers and collaboratively negotiate new understandings of their profession and practices' (Hawkins 2004, 6).

In part due to the wide range of data collected, analysis involved an ongoing shifting back and forth between data and a strategy of 'progressive focusing' (Parlett and Hamilton 1976). Through a process of transcribing and triangulation across the data sources, significant strands became apparent:

(1) Language learning, multilingual repertoires and identity
(2) Multilingual composition and creativity
(3) Culture, international partnerships and active citizenship
(4) Learner autonomy, critical thinking and student voice
(5) Engagement and motivation
(6) Sites of learning: school, home and online
(7) Transformative pedagogy
(8) Curriculum policy, planning and professional development

Key research findings were identified under these strands which are discussed below.

Data findings and discussion

In this section our three research questions are used to structure the presentation and discussion of key data.

(1) What is the significance of MDST for young people and their learning?

Language learning, multilingual repertoires and identity

The project upon which this study is based focussed on the creation and sharing of digital stories as a context for language learning within and across schools. Pedagogically, it drew on content- and task-based approaches to language teaching incorporating a NBLT perspective and emphasising learner agency and voice. In contrast with the 'strong' interpretation of communicative language teaching maintaining that L1 should be banished from the classroom, the expectation here was that digital stories should be created bilingually. What then did the data reveal?

There was substantial evidence from data collected across schools that students' language learning was enhanced by involvement in a task which was deemed to be authentic. This related to communicative purpose and presentation to a genuine audience, local and global, on the one hand, and to the scope allowed for learner agency and self-representation on the other. Reflecting on the process of making a digital story based on a spoof

cookery programme, a lower intermediate student of Arabic as a foreign language at the Peace School explained how having something to say that matters, helps you find the words to express yourself: 'When you're in the real world and you need to say it, it just comes out of your mouth' (Student, PS). As other studies have revealed (Castañeda 2013), the sense of responsibility and ownership engendered by digital storytelling, when students are entrusted with making their voice heard, is a powerful stimulus for learning and one to which we return below.

In story, what is real and authentic may of course also be imaginary and this was apparent in the work of a beginners' French class at St Michael's Grammar School for Girls, who transformed their textbook topic of 'House and home' into a magical 'inside out' world of mystery and adventure. This provided the impetus to go beyond the pre-digested language presented and practised by the teacher to find out new language required by the stories they were telling. The class teacher was struck by how much her students were able to do independently when given the space to do so. This applied to the development of dictionary skills, applying grammar rules (for example, in shifting from first to third person forms of verbs) and, perhaps most significantly to 'manipulating language that they had previously learnt for a completely new purpose' (Teacher, SMGS). Resonating with findings from other studies (Reyes, Pich, and García 2012; Castañeda 2013), she also noticed significant progress in speaking with students 'putting their French phonics together to be able to work out the pronunciation' (Teacher, SMGS) and practising the voiceover again and again to get it right. The development of confidence in speaking was in fact widely commented on by both students and teachers across the project schools and, significantly, was found to also apply in the case of students preparing for a GCSE German-controlled speaking assessment who felt inspired to improve both the content and use of language in their work.

The bilingual aspect to story construction led to varying degrees of translanguaging at different stages in the creative process. In working collaboratively in groups, students tended to switch to L1 (or to their dominant thinking language) for planning, task negotiation and discussion. With regard to scripting, more linguistically advanced students went directly into the 'target language' and then translated into English, but mostly students scripted first in English and then translated into the target language. Interview data revealed how the cross-lingual comparison involved stimulated important metalinguistic insights, not least the danger of adopting too literal an approach. Thus, the teacher working with French beginners commented on how her students were starting to appreciate that 'you can't translate directly from English into French' adding that this is something 'You don't really find out until you're trying to use language for your own purposes' (Teacher, SMGS). When it came to presenting digital stories at film festivals, it was also very evident that students were proud to be representing themselves across their language repertoires in the integrated and holistic way captured in Cook's 'multicompetency' model and in the concept of multiliteracies (Cope and Kalantzis 2000) In this act of resistance against a prevailing monolingual discourse, we saw a reassessment and reshaping of identity investment.

Sites of learning: school, home, online

The rapid development of computer technology and easy access to the Internet for information from sites worldwide has blurred boundaries between schools and the outside

world. Our observational and interview data as well as a number of digital stories (e.g. *Lion Dance* and *Profiteroles*) have highlighted a range of flexible ways to facilitate learning across different sites: school, home, community, online and media and how to closely connect these sites. We saw how the project could provide a stimulus for parental involvement: 'How can we help? … It's very, very good because everyone's getting involved' (Parent, HHCS). As one parent put it (HHCS), '… it's a whole new learning process just coming to the school and communicating with the teachers and the principal'. A teacher, who participated in the project, reported her experience of not having to work hard to get parents involved because they were highly motivated to work on the project with their children. Parents supported children in making good use of media and online learning tools to research story themes and to encourage language learning.

Culture, international partnerships and active citizenship

In our research, the making of multilingual digital stories encouraged students to explore culture and identity on their own terms in flexible, critical and non-essentialised ways. In recent research, empathy has been considered 'to have a lot of positive potential for intercultural competence' (Mercer 2016, 98). In our project, engagement in the process of composing and critiquing digital stories allowed students to actively imagine other lives and develop empathy in language learning. The film festivals held at Goldsmiths at the end of each year proved to be very important as a focus both for sharing and celebrating work. Feedback indicated that the festival made a real impact on students in terms of intercultural learning and the challenging of stereotypes as well as a sense of pride in the bilingual stories they had created:

> the feedback that I heard mostly was that they really enjoyed learning about the other cultures, the Taiwanese stories, the Chinese and they loved the Arabic Cinderella. They thought that was brilliant. They found that really useful as a tool to looking into the lives of other people of their age across the world. (Teacher, SMGS)

The use of a web-based application, VoiceThread, enabled students to experiment with a range of modes of feedback: text, voice and video. Students became sensitive to the work of others and developed a supportive community to share their own work and appreciate the hard work of others.

Multimodal composition and creativity

We examined how multimodal composing developed young people's creative and dialogic thinking and interrogated the notion that young people are active and skilled users of digital technology. Our interview data demonstrated that the project developed a range of linguistic and media skills including the manipulation of different modalities to make meaning and shape stories to engage a multilingual youth audience: 'Normally, they say okay it's a project and dive straight in, not really thinking about the process they need to go through. While doing this project they really thought about it and structured it' (Teacher, SMGS). Students made key decisions about the multimodal composition process including the type of digital story to be produced and the languages to be employed. A lead teacher in the project, reflected upon scriptwriting in Arabic and the drafting

process: 'thinking skills have just gone up, everything is just analysed more, everything is thought through better … they're really thinking in depth … . If they weren't doing digital storytelling they wouldn't have that skill to think outside the box with the language' (Teacher, PS). A student in another of the core project schools reflected upon the benefits of collaborative creativity and the demands of listening to the ideas and perspectives of others: 'this has helped to develop our ideas and expand on other's creativity to gain a much more successful movie' (Student, WHS). Teachers and students in the project demonstrated how multimodal composing can promote collaborative creativity and deeper thinking skills. These findings support the notion that students need to be engaged in meaningful activities to develop critical and creative thinking.

Learner autonomy, critical thinking/engagement and student voice

In creating digital stories, students were empowered to draw on their own knowledge and experience and start taking ownership of the creative process working more independently:

> the stories reflect their own culture and … they sort of own the language and start asking questions: How do I say this? They are asking for information about the language they want to use on particular projects. They have personalised it which means they are owning the project rather than us imposing on them the list of vocabulary they need to learn. They are themselves asking for the vocabulary that they need for their own reality. (Teacher, EAS)

As well as witnessing how learners were able to search for language and images to represent their own ideas, teachers recognised how their own role changed during the project as students were making decisions and taking the lead: 'so it was a massive difference between [being] in the classroom and [being] in a digital storytelling atmosphere' (Teacher, PS).

An innovative aspect of our research project was training a small group of students as co-researchers. Lead teachers in the project recognised the pivotal role that student co-researchers started to play in particular contexts to encourage peers to develop higher order thinking skills:

> the co-researchers when they were interviewing other people in their class I felt that that got them (the other students) starting asking themselves about their own project: I can't just start like that. I need to ask myself some questions before I start. That was a really valuable skill. (Teacher, SMGS)

These young people surprised the research community by their commitment, insight and ability to make sense of their research findings and present a range of views on language learning through digital storytelling. Our research showed digital storytelling not only engaged students with language learning but also provided a new basis for the construction of 'possible selves' (Dörnyei 2009).

(2) What is an appropriate pedagogical framework for carrying out MDST work in schools?

Arising from its roots in community arts, a central concern of digital storytelling has been to allow alternative perspectives and lifeworlds to be represented. In the educational

context, this inclusive and participatory orientation has inevitably required a more active role on the part of learners and a corresponding shift from teachers to establish the kind of classroom practices and relationships that enable this to happen. Reflections by teachers towards the end of the first year of the project showed how this kind of change takes time. One colleague mentioned her 'fear of giving the students the control to work on their own' and the way this might affect behaviour, but went on to explain how 'step by step I just realised how much they are learning without me dominating everything' (Teacher, HHCS). Importantly, whilst emphasising the importance of learner agency and a sense of ownership, teachers realised how structuring, modelling and a range of other scaffolding strategies, were needed to enable this greater student autonomy. They also discovered the benefits of harnessing the support of parents and the range of forms, – linguistic, cultural, psychological and practical – that their support can take.

Consistent with critical and dialogic views of learning, in which space is made for collective thinking, experimentation and ongoing peer review, digital storytelling is seen to fit pedagogically with, project-based, task-based and thematic (cross-curricular) approaches. Distinctive though within the Critical Connections model is the multilingual dimension. As our data has shown, the expectation that stories are created in bilingual version is important because, instead of compartmentalising languages, it recognises how they interrelate both in the mind and in use. This enables students' plurilingual repertoires to be represented holistically and syncretic identities to be constructed, building confidence and encouraging a greater valuing of multilingual skills. We have also seen that it can stimulate valuable metalinguistic and intercultural insights, for example the dangers of word for word translation and the importance of challenging stereotypes: '… you get to see how other people cope with languages and how other people interpret them. They might do things in a different way to you' (Student, SMGS). At a more practical level the bilingual approach has meant that stories can be shared and responded to within and across schools in the UK and internationally, establishing an important community of practice and developing skills required for active global citizenship: 'Creating the film for real people made me break the fear of speaking aloud in German and expressing myself' (Student, SBS).

A question that arose as the project unfolded was how MDST could be embedded most effectively within teaching programmes. Due in part to the cross-curricular nature of digital storytelling but also to its emphasis on active learning methods, a thematic approach was found to work particularly well (Brown and Brown 1998, 2003; Grenfell 2002; Coyle, Hood, and Marsh 2010; Curtain and Dahlberg 2015). Linking this with well-established stages in film-making (pre-production, production and post-production), a 10-stage framework was created taking account of the following goals:

- Learner engagement and control within a supportive framework (not a free-for-all)
- Teacher modelling and differentiation strategies to ensure progression
- Staged construction process with clear deadlines monitored by teacher
- Parental involvement
- Digital media training as appropriate including focus on multimodal composition
- Higher order thinking and critical skills (peer assessment)
- Presentation of end product to an audience

The framework evolved through regular meetings with teachers and was trialled within both mainstream and complementary school contexts. Feedback from teachers in the second year of the project showed how they had gained greater confidence in their planning and a clearer sense of direction. One colleague articulated the importance of 'having a clear plan and deadlines', pointing out how she 'found it much easier to embed MDST in my scheme of work in the second year using the 10-stage plan … . It is clear and gave me the essential steps needed to tailor my lessons and move into the project' (Teacher, SBS).

In the Handbook for Teachers (Anderson, Chung, and Macleroy 2014b), more detailed guidance was provided on using the framework and this is supported by templates for planning at three levels: overview, mapping and detailed plans The plans support the dual content and language focus central to the thematic approach and, in relation to activities, require the identification of language functions and thinking skills before specification of core structures and vocabulary.

(3) What are the implications for policy and teacher professional development?

Our research project looked at how curriculum policy for language learning could be transformed and a more meaningful interdisciplinary approach adopted. Our research findings demonstrated the importance of working closely with lead teachers from the outset to shape our pedagogical approach and develop strategies to embed this way of learning languages across the curriculum. We had to discover ways to work with digital technology in varied classrooms with different levels of resources and expertise. We also looked at how making stronger links between sites of learning and actively involving parents in the language learning process fostered digital storytelling in a range of languages. Research suggests that school learning is not enough and 'mechanisms to create stronger and more integrated links between school and non-school digital-making activities need to be devised, trialled and made available' (Sefton-Green and Brown 2014, 14). Finding routes into deeper forms of engagement with digital making is still seen as a policy challenge. Our project sought to change this and make these Critical Connections across different sites of learning.

Developing a project-based curriculum was demanding and had an element of risk, so students and teachers had to learn to problem solve and understand there were many different ways to complete the final digital stories. Lead teachers engaging in our project found these changes in curriculum planning both transformative and challenging, as they were required to critically reflect upon their own teaching practices and foster a dialogic approach towards language learning: 'Definitely for me it has completely changed. It's not a quantum leap and it's not all of a sudden. Definitely throughout the months I've noticed a change even in the way that I'm thinking and the way I'm planning the lessons and putting the curriculum together' (Teacher, EAS). A lead EAL teacher explained how becoming part of the project radically changed the nature of his relationship with students as it became one of collaborative rather than coercive relations of power and he viewed this approach to learning 'as the most effective way to promote the academic achievements of students from marginalised groups' (Teacher, CC).

Our project demonstrated the crucial role senior managers could play in extending and embedding MDST in the curriculum in their schools. Katja Ting, headteacher at Hua Hsia Chinese School, viewed the project as a great opportunity to extend students'

learning and transform teaching methods in her school. From a management perspective, she supported one lead teacher's professional development to carry out the project in the first year and then organised this training to be cascaded to other teachers in the second year. This could then be extended to new teachers in subsequent years and, in this way, the project becomes sustainable and firmly embedded within schemes of work in the school.

An important concern in developing this project was to show how MDST could be built into teaching programmes both within and across subjects. This emphasis helped in addressing issues teachers experience in taking on new initiatives. A range of approaches were adopted by teachers in our project. These included:

- relating the project to themes and key skills featuring in current schemes of work and examinations;
- finding a complementary activity with which MDST could be linked, e.g. working towards a drama performance;
- seeing the project as a way of promoting course development priorities, e.g. Content and Language Integrated Learning (CLIL) and developing international links.

Teachers believed in the project and worked hard to make it happen:

> I wanted to get involved because I have, in all my experience of teaching, a belief that a language doesn't stop in the walls of the classroom; it's an experience that goes beyond the walls of the classroom; it's an experience that relates to personal life learning and to creativity and to the realistic life of the person. (Teacher, PS)

Conclusion

The appeal of MDST is that it combines a focus on language and digital communication with the creation, sharing and critiquing of personal stories. In reviewing the literature on digital storytelling, we found that whilst numerous studies have been carried out in relation to digital storytelling through the mother tongue (mainly English), investigations of digital storytelling as a means of developing foreign or community language learning were much more limited, although interest has been growing in this area in recent years. Also most studies focussed on the development of particular languages rather than taking a broader and more inclusive perspective.

In presenting key findings from our MDST project we examined:

- the significance of MDST for young people and their learning;
- an appropriate pedagogical framework for carrying out MDST work in schools;
- the implications for policy and teacher professional development.

The research reinforced findings from other studies in language learning and digital technology, but also highlighted the uniqueness of our work particularly in its integrated approach across languages. The process of creating and sharing multilingual digital stories enhanced active citizenship and intercultural ways of thinking as well as making Critical Connections across sites of learning. MDST fostered interdisciplinary ways of learning where arts, drama, music, technology and languages develop students' metalinguistic and

metacognitive skills and lead to higher order thinking and richer and more sustainable language experiences. As a model for teacher professional development the project proved successful in allowing teachers space, through regular meetings over two years, to develop ideas, to discuss how they work in practice and then to develop and refine them. This 'social processing' of knowledge (Louis 2006, 3) has been shown to lead to deeper levels of understanding and thus to making innovations sustainable in the longer term.

The vision behind our project had multilingualism at its core (Anderson and Macleroy 2016). Challenging what we saw as fragmented and essentially monocultural perspectives on literacy and the curriculum, we wanted to build a network of schools and classrooms where different languages were being taught and which could facilitate linguistic and intercultural awareness and exchange. As well as linguistic and intercultural aims there was also a social justice strand to our thinking to do with the marginalisation of children's home languages and an ongoing failure to recognise and support the important work carried out in thousands of community-based complementary schools in the UK. We wanted to foster dialogue between mainstream and complementary sectors, but also with link schools abroad which we saw as a potential means of enhancing intercultural and global citizenship perspectives. Following the philosophy underlying digital storytelling we also wanted to foster learner agency and voice and we realised that this would have implications for the pedagogical approach that would be encouraged and for the professional development support we might need to provide for teachers.

We believe that what distinguishes this research most significantly from other studies is the coherent vision it provides for language and literacy learning. All too often educational policy and research concentrate on particular situations or strategies in isolation. An important aim in this study has been to make connections and create synergies. The Critical Connections project has now entered a second stage of funding and development and 'in moving forward with multilingual digital storytelling' research is now being developed with a sharper focus within the key strands to deepen understanding of the process and how MDST encourages an interdisciplinary view of language learning and engagement with digital technology. The expansion of the project has allowed students to actively connect the different communities to which they belong and understand through MDST that experiences with languages in these different worlds do connect.

Notes

1. Community/Heritage language
   Various terms are used to refer to the languages of minority groups. In the US and Canada, the term that tends to be used most commonly is 'heritage languages', whereas in the UK and Australia the most widely used term is 'community languages' and that is the term that we use in this article.
2. Complementary school
   The term 'complementary' school (also referred to as 'supplementary,' 'mother tongue' or 'community' schools) is used here to refer to voluntary community-based schools which operate mainly at weekends.
3. Project website
   For further information about the project and to see multilingual digital stories created in the project, visit the project website: https://goldsmithsmdst.wordpress.com/

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